Fastly + GANNETT

How Gannett uses Fastly to deliver and secure the fastest-loading news site in the U.S.
Gannett is the largest news publisher in the U.S. with close to 300 local news brands and a national publication, USA Today. With an unmatched reach at the national and local level, Gannett touches the lives of more than 150 million users with Pulitzer-Prize winning content, consumer experiences and benefits.

Milliseconds matter

When news breaks, Google’s typical SEO ranking preference is to track the first story published, pushing it to the top of its search results. Being the first to publish a story is a huge determining factor of future traffic to Gannett’s sites, and always-current content is a critical component of its business.

Until 2017, Gannett relied on a different solution for its content delivery needs. Because that solution relied on a time-to-live-based method for purging content, the time needed to push a piece of content live ranged anywhere between 45 to 90 seconds, plenty of time for another publisher to break the story first. By aligning its properties on Fastly’s edge cloud platform, Gannett is consistently first to press with its instant publish platform, which leverages Fastly’s Instant Purge functionality. This gives Gannett the power to push content live, on average, in 150 milliseconds globally. With content live in near-real-time, Gannett saw traffic and engagement increases across its properties. And, because Fastly’s platform looks for content in cache before going back to origin, this represents major savings for Gannett — about 35% in egress costs.

With increased engagement and daily breaking news stories comes the need to handle large traffic spikes. Previously, Gannett relied on load balancing at the DNS layer, which required overprovisioned resources at origin and didn’t offer the granular control and visibility their team needed. Once on Fastly, Gannett engineers built a custom load-balancing solution using edge dictionaries, VCL snippets, and back end health checks. This new system allows the team to load balance requests to all of Gannett’s back ends at their typical 50/50 split.

“As of Dec. 31, 2019

"Two-tenths of a second across Fastly’s platform to invalidate content and four to five seconds to push a config out across a network — I can’t tell you what a game-changer Instant Purge was for us.”

– Erik Bursch
VP, PRODUCT TECHNOLOGY
GANNETT

*As of Dec. 31, 2019
or weight the balance from 0 to 100 instantly via their CI/CD pipeline and the Fastly API. No need to wait for time-to-live (TTL) changes on DNS records or spend unnecessary resources to keep everything at a minimum level to handle maximum traffic — Gannett can now control the flow of traffic between each region as needed.

Getting content out quickly and having the infrastructure to handle the resulting traffic only matter if headlines load quickly, too. Well aware of user expectations when it comes to speed and performance, Gannett prides itself on building an exceptional experience — and Fastly’s ultra-performant global network plays a big part in that. In early 2020, USA Today was ranked fastest in a SpeedCurve test against all major U.S. news sites. The site reached Largest Contentful Paint (LCP), which measures the time elapsed before the largest content element in the viewport becomes visible, in 0.48 seconds, and reached Visually Complete — the moment when all elements within the visible area of a web page are 100% loaded — in less than four seconds.**

Putting the power in developers’ hands

Before making the switch to Fastly, Gannett developers had to deploy config changes and wait for the config to be updated across their previous delivery provider’s network. In some cases, the Gannett team did not have access to make changes to their own config without going through their previous provider. The process to deploy changes to a staging environment took 30 minutes. Once the changes were cleared for production, that deployment required another 30–45 minutes to go live. This minimum 60-minute turnaround time grew even longer if config changes required revisions, rollbacks, or debugging.

Fastly enables Gannett’s developers to be in control with direct access to their own configs. Now, config changes are up and running in less than five seconds — a 98.86% improvement over the previous platform. This new level of authority has empowered the Gannett team to:

- **Craft its own interactions** using VCL, edge dictionaries, snippets, and ACLs for a finer level of control and capability
- **Streamline workflows** so each individual team can push code changes without worrying about being bottlenecked by other teams making their own code changes simultaneously

“We have the utmost confidence in Fastly handling our traffic spikes for breaking news events. We never really have to think, ‘Is Fastly going to be able to handle this?’”

— Ron Lipke
MANAGER, SITE RELIABILITY ENGINEERING
GANNETT

*As of June 10, 2020
○ **Practice self-service** by managing their own edge dictionaries through the Fastly API and Terraform, and managing redirects at the edge through VCL snippets

“Fastly gives my team the ability to interact with not just a subset of features or a subset of configs, but with all of our configs in their entirety in an automated fashion.”

-Erik Bursch
VP, PRODUCT TECHNOLOGY
GANNETT

Building a solution for local support when the country needed it most

In the early days of the COVID-19 pandemic, Gannett built and launched supportlocal.usatoday.com — a site that allows visitors to purchase gift cards to their favorite local restaurants and shops and use them later, providing small businesses around the country with an influx of cash.

In less than 48 hours, Gannett developers stood up the site, in large part because Fastly allows them to create a standard boilerplate service upon which to build their products. This efficiency eliminates the need to build something from scratch over and over, or hastily piece together a service from parts of other products.

Within just a few days of the launch, the site had more than 90,000 daily page views and more than 5,000 small businesses submitted for participation, and has continued to grow since.

“The freedom and tools to innovate at scale

Gannett developers are always thinking about what’s next for their sites and apps and

“Fastly puts us in a position to have a solid media presence and be a voice for our end users.”

– Erik Bursch
VP, PRODUCT TECHNOLOGY
GANNETT
are always eager to beta test the new features Fastly frequently brings to the market. A pioneer at the edge, Gannett was one of the first to experiment with Fastly TLS, WAF API, as well as device detection, among others. Compute@Edge — Fastly’s serverless compute environment — is the next frontier, and the Gannett team is excited about the possibilities there, as well.

Gannett was also an early adopter of Image Optimization (IO), a Fastly product that transforms and serves images faster from the edge. Before IO, Gannett had to physically store multiple crops and versions of each image they served on their previous content delivery network. To make a crop change, the team had to ensure that the change was supported in Gannett’s content management system, and that the crop change value was passed along in the API tier and onto the end user.

Fastly IO was able to fix this issue, storing a single asset at the edge and delivering it to multiple Gannett publications in any defined crop. This resulted in greater cost savings and faster user experiences.

Video, which represents one of Gannett’s largest levers for advertising monetization, was also consolidated over to Fastly. This move allows the team to control video quality and present variations of video content to end users from a single place.

Serving its media assets through Fastly allowed Gannett to build profound efficiencies and realize significant cost savings on the road to becoming the most performant news platform in the industry.

Security that’s fully visible for developers and completely invisible to users

The decision to move online security to the edge was part of Gannett’s overall digital transformation. Because Gannett developers were already engaged with Fastly for content delivery, there was synergy in also using Fastly’s Web Application Firewall (WAF) to secure Gannett’s digital properties.

A major benefit to the Gannett team is the full visibility Fastly’s WAF gives them into their traffic. Fastly’s partnerships with SumoLogic and BigQuery allow Gannett’s developers to seamlessly visualize and analyze traffic data. That data can help the security team identify new malicious signatures, and those signatures can be used to tune the WAF, making Gannett’s products even more secure.

But perhaps most important is the fact that Gannett users can remain blissfully unaware

“Fastly has always been able to keep up with us. We’re never going to outpace their ability to do what we need them to do for us.”

— Rick Pelletier
SENIOR SECURITY ENGINEER
GANNETT
of what’s going on behind the scenes to protect them and their information. They don’t experience latency issues or receive security alerts. There is no effect on the user experience — which is exactly how it should be.

Leading the new age of news

Gannett sets the bar when it comes to innovative digital publishing. By using Fastly, their team can instantly serve the latest headlines, scale to accommodate breaking-news-sized traffic, build significant efficiencies into their pipeline, and secure the end-to-end experience. This means their readers can confidently access the information they need the very moment it becomes news, and Gannett can continue to lead the industry on both a global and local scale.

“I have no concerns with Fastly’s ability to handle large scale attacks and mitigate malicious traffic at scale at the edge. And that’s a huge benefit for us.”

– Ben Auch
CYBERSECURITY DIRECTOR
GANNETT